EXHIBIT 2

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Applicant: § §§§	
Levi RUSSEL §	
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    Levi RUSSEL §
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Serial No.:   US 14249174 §
§   Group Art Unit:
§   2412
Filed: April 9 2014 §
§   Attorney Docket: **3258**
For: METHOD AND SYSTEM FOR §
OPERATING A WIRELESS ACCESS POINT FOR §
PROVIDING ACCESS TO A NETWORK §
§
Examiner: JAVAID, J. §

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE TO NON-FINAL OFFICE ACTION

Sir:

This Amendment is filed in response to the Non-Final Office Action dated January 27 2015, issued by the United States Patent and Trademark Office in connection with the above-identified Application, which is being filed on or before July 27 2015, with three months' late fees and the requisite petition thereof.

Kindly amend the above-identified application as follows:

Amendments to the Claims are reflected in the listing of claims that begins on page 2 of this paper.

Remarks/Arguments begin on page 9 of this paper.

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.   (original) A method of operating a single network adapter, comprising a single network interface card or module, to communicate wirelessly with a first sub-network and a second sub-network, the method comprising:

setting up a first network address and routing table in the network interface card or module for use in the first sub-network;

setting up a second network address and routing table in the network interface card or module for use in the second sub-network;

using said single network interface card or module to receive data for one of the first and second sub-networks, and to re-transmit the data to the other of the first and second sub-network, using the network addresses and routing tables,

wherein the first sub-network includes a network gateway and the network adapter is configured to control access from the second sub-network to the network gateway, and

wherein the step of receiving data comprises receiving a request from a user via the second sub-network to access the gateway on the first sub-network, verifying the user's access rights, and allowing the user to access the gateway if and only if the user is entitled to access the gateway.

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2.   (original) The method as claimed in claim 1, wherein the second sub-network comprises a NAT routable sub-network that is subservient to the first sub-network.

3.   (original) The method as claimed in claim 1, wherein the network gateway is provided by a wireless internet router, the first and second sub-network belong to a wireless network, and the method further comprises:

generating broadcasts to inform wireless stations that the single network adapter is an internet gateway, and

sending the broadcasts to the wireless internet router for forwarding to the wireless network.

4.   (original) The method as claimed in claim 3, further comprising generating and sending said broadcasts on the wireless network at a sufficient rate to override broadcasts from the wireless internet router which indicates the wireless internet router to be an internet gateway.

5.   (original) The method as claimed in claim 4, further comprising automatically detecting packets on at least one of the first and second sub-networks that are not using the hotspot controller as the network gateway, and automatically adjusting the frequency of said broadcasts on the wireless network which set the network adapter as the network gateway, according to the number of such packets that are detected.

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6.   (original) The method as claimed in claim 3, further comprising receiving a user instruction to adjust the rate of generating and sending said broadcasts on the wireless network setting the network adapter as the gateway, and adjusting said rate according to the user instruction.

7.   (original) The method as claimed in claim 1, wherein said verifying comprises retrieving locally or remotely stored user subscription information or information about user permissions to access the gateway.

8.   (original) The method as claimed in claim 1, further comprising controlling an allocated bandwidth through the gateway for users connecting via the second sub-network.

9.   (original) The method as claimed in claim 1, wherein said method is performed by executing driver software to configure a standard network adapter to exchange network traffic between the first and second sub-networks.

10.   (original) The method as claimed in claim 1, wherein the step of receiving data comprises authorising and authenticating a user.

11.   (original) The method as claimed in claim 1, wherein the second sub-network includes a plurality of devices, said plurality of devices incorporating a respective plurality of network interface cards or modules, said network interface card or module being configured to communicate directly with said plurality of network interface cards or modules.

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12.   (original) The method as claimed in claim 1, wherein the first sub-network and second sub-network are within wireless communication range of said single network interface card or module.

13.   (original) A computing apparatus for exchanging network data traffic between a first sub-network and a second sub-network, the apparatus comprising:

a network adapter, comprising a single network interface card or module, for communicating wirelessly with the first sub-network and second sub-network;

a processor;

a data store storing a driver for the network interface card or module, the driver being configured to store a first network address and routing table for use in the first sub-network; a second network address and routing table for use in the second sub-network; to operate said single network interface card or module to receive data for one of the first and second sub-networks and to re-transmit the data to the other of the first and second sub-network, using the network addresses and routing tables,

wherein the first sub-network includes a network gateway and the network interface card or module is configured to control access from the second sub-network to the network gateway and comprises an authentication controller for receiving a request from a user via the second sub-network to access the gateway on the first sub-network, verifying the user's access rights, and allowing the user to access the gateway if the user is entitled to access the

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gateway, or blocking the user access to the gateway if the user is not entitled to access the gateway.

14.   (original) The apparatus as claimed in claim 13, wherein the network gateway is provided by a wireless internet router, the first and second sub-network belong to a wireless network, and the apparatus further comprises a transmitter for generating broadcasts to inform stations that the single network adapter is an internet gateway, and sending the broadcasts to the wireless internet router for forwarding to the wireless network.

15.   (original) The apparatus as claimed in claim 14, wherein the transmitter is configured to generate and send said broadcasts on the wireless network at a sufficient rate to override broadcasts from the wireless internet router which indicates the wireless internet router to be an internet gateway.

16.   (original) The apparatus as claimed in claim 15, further comprising a packet detector for automatically detecting packets on at least one of the first and second sub-networks that are not using the hotspot controller as the network gateway, and automatically adjusting the frequency of said broadcasts on the wireless network which set the network adapter to as the network gateway, according to the number of such packets that are detected.

17.   (original) The apparatus as claimed in claim 13, wherein the authentication controller comprises locally stored user subscription information or information about user permissions to access the gateway, or a retrieval

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system for retrieving user subscription information or information about user permissions from a remote location.

18.   (original) The apparatus as claimed in claim 13, wherein the authentication controller is programmed to authorise and authenticate a user.

19.   (original) A method of operating a single network adapter consisting of a single network interface card or module for communicating with a local area network that includes a first sub-network and a second sub-network of the same type, the second sub-network including a plurality of devices, said plurality of devices incorporating a respective plurality of network interface cards or modules, said network interface card or module being configured to communicate directly with said plurality of network interface cards or modules, and the method comprising:

setting up a first network address and routing table in the network interface card or module for use in the first sub-network;

setting up a second network address and routing table in the network interface card or module for use in the second sub-network;

using the network interface card or module to receive data for one of the first and second sub-networks, and to re-transmit the data to the other of the first and second sub-network, using the network addresses and routing tables,

wherein the first sub-network includes a network gateway and the network interface card or module is configured as a hotspot controller to control access from the second sub-network to the network gateway, and

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wherein the step of receiving data comprises receiving a request from a user via the second sub-network to access the gateway on the first sub-network, verifying the user's access rights, and allowing the user to access the gateway if and only if the user is entitled to access the gateway.

REMARKS/ARGUMENTS

Reconsideration and allowance of this application are respectfully requested. Currently, claims 1 to 19 are pending in this application.

As a precaution against a possible misunderstanding regarding the content of the presently claimed invention, Applicant notes that the present rejection of claim 1 (and others) appears to be based on the previous version of the claim (claim 30) in the parent application (13/127,223). By way of example to assist the Examiner, claim 1 as filed requires that the first and second routing tables are set up on the (single) network interface card or module, whereas the rejection of claim 1 refers instead to routing tables being set up on the network adapter, as per claim 30 of 13/127,223.

Should such a misunderstanding have arisen, Applicant respectfully requests issuance of a second Non-final Office Action, rather than a Final Office Action, should the Examiner feel that an additional office action is necessary.

Rejections under 35 U.S.C. §103 in view of Luo, Knox and Wu:

Claims 1, 7, 9-13 and 17-19 were rejected under 35 U.S.C. §103(a) as allegedly being obvious in view of Luo et al (US 7,469,294, henceforth "Luo"), Knox et al (US 2007/0225019, henceforth "Knox") and Wu et al (US 2008/0069065, henceforth "Wu"). Applicant traverses this rejection.

In order to establish a *prima facie* case of obviousness, all of the claim limitations must be taught or suggested by the prior art. The combination of Luo in view of Knox and Wu fails to teach or suggest all of the claim limitations of independent Claims 1, 13 and 19.

Taking one specific example, none of Luo, Knox or Wu, either in isolation or in combination, teach or suggest: setting up a first and a second network address and routing table in a single interface card or module operable to communicate with a corresponding first and second sub-network.

Luo contains no teaching or suggestion of a single network interface card or module, let alone such a card or module with two network address and routing tables and in communication with a first and second sub-network in the manner required by the claims. With regard to Knox, the paragraph highlighted by the Examiner (p. 2, para 34) states merely that '*the mobile device 50 maintains a record of the address routing table for the network that can be transmitted to the intelligent base stations 20 of the network to maintain connectivity with the network*', which refers only to a single routing table and is silent as to where it is stored. Wu does not appear to make any reference at all to a network address and routing table, let alone to two such tables stored in a single network interface card or module.

Additionally Luo fails to teach or suggest – and Knox and Wu fail to remedy the deficiency of – the further features of: using an aforesaid single network interface card or module to receive data for one sub-network and re-transmit the data to the other sub-network using the network address and routing tables and, consequently (using the single network interface card or module as aforesaid), receiving a request from a user via the second sub-network to access a gateway on the first sub-network, verifying the user's access rights, and allowing the user to access the gateway if and only if the user is entitled to access the gateway.

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Furthermore, the Examiner does not specify what in the prior art he considers to correspond to the claimed elements of the first and second sub-network. A *prima facie* case of obviousness requires reasoning in respect of all claim elements. As per *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970), all words in a claim must be considered in judging the patentability of that claim against the prior art.

In the interest of expediency, given that a similar rejection was raised for the claims of the parent application (US 13127223) in the Office Action of October 9th, 2013, the Examiner's additional remarks in that Office Action regarding the construction of the first and second sub-network will be considered, without making any admissions as to the relevancy thereof and without wishing to craft a rejection or imply same. In paragraph 3.b on page 3 of the Office Action of October 9th, 2013, the Examiner states: "*elements 30-38 and 68-70 in figure 3 of Luo were taken as comprising the "first sub-network" and elements 50-62 in figure 3 of Luo were taken as comprising the "second sub-network". This interpretation ... allows for the first sub-network to include the network gateway (element 30 in figure 3 of Luo) and a request is received from a user via the second sub-network (see the user 50, for example, in figure 3 of Luo), which resides in the second sub-network.*" According to this construction, the first sub-network is construed by the Examiner as the entirety of the service provider network (30, 32, 68) and the entirety of the customer VPN (36, 38, 70), and the second sub-network is construed by the Examiner as the exclusively non-wireless and long distance network infrastructure elements 50-62 (consisting of a Packet Switched Telephone Network, PSTN,

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Digital Subscriber Line, DSL, Access Network and the Internet) via which a remote user can connect to the customer VPN.

However, the construction asserted by the Examiner fails for several reasons, including:

(1) Applicant still maintains that the VHG 30 and AAA server 32 cannot be construed as 'a single network adapter'. The Examiner notes in the Office Action of October 9th, 2013 that "*it is reasonable to collectively take multiple elements taught by the prior art and view them collectively as a single element for claim interpretation purposes*". However, according to MPEP §2111.01, the words of a claim must be given the "plain meaning" unless such meaning is inconsistent with the specification. The person of ordinary skill in the art would understand the plain meaning in the art of a 'network adapter' and would recognise, based on the description of Luo (for example at col. 4, l. 58-64) that the VHG 30 and (described as optional) AAA server 32 are two separate networked devices within a network (the service provider network) and each, by definition, include a separate network adapter. The Examiner later suggests that <u>Wu</u> in fact teaches 'a single network adapter', comprising a single network interface card or module. The Examiner states that Paragraph 26 of Wu discloses "*using a single wireless network interface adaptor, which is disclosed to refer to a network card*". The referenced paragraph in Wu defines a 'network adaptor' <u>as</u> a card or built-in hardware used to connect a computer or handheld device to a network. The Wu reference thus directly contradicts the asserted construction in which VHG 30 and AAA server 32 of Luo correspond to 'a single network adapter' (furthermore demonstrating that Wu is incompatible with the

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Luo reference and that in fact a combination of these references would be inoperable).

(2) According to the present alleged construction, the VHG 30 is construed both as (a) a constituent part of 'a single network adapter' and (b) 'a gateway' in a first sub-network with which said single network adapter communicates wirelessly. This a logical and practical impossibility (a part of a network adapter does not communicate wirelessly with itself), and a construction which the person of ordinary skill in the art would clearly reject as offending the plain meaning of the words of the claim. Furthermore this reading is a violation of the principles of claim construction; it is not permissible to read separate claim elements onto a single prior art element. Each claim element must be construed separately.

For at least these reasons the asserted construction fails, and thus reasoning is not provided to support a *prima facie* case of obviousness.

Furthermore, it is respectfully submitted that the Knox and Wu references cannot properly be combined with the Luo reference because they are not analogous prior art: Luo specifically concerns authorization, authentication and accounting for a single fixed, wired and private network (VPN). Knox, meanwhile, relates to hardware and software for broadband wireless communications (p. 1, para 2), in particular for allowing access to a public network on a moving train. Wu relates to a method of seamlessly roaming between multiple wireless networks, and focuses on the problem of maintaining real-time IP data transmission in an IP telephony service while roaming between different networks (p. 1, para 2). Knox and Wu concern different

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problems in different fields. Thus it is respectfully submitted that Knox and Wu are non-analogous prior art to Luo, and thus cannot properly be combined.

For all of these reasons it is submitted that a *prima facie* case of obviousness has not been established in respect of claims 1, 13 and 19.

Claims 7, 9-12, 17 and 18 depend on claims 1 and 13 and include all features therefrom, and thus are patentable for at least the reasons given above in relation to claims 1 and 13.

Accordingly, Applicant requests that the rejection under 35 U.S.C. §103 in view of Luo, Knox and Wu be withdrawn.

Other Rejections under 35 U.S.C. §103

Claims 2–6, 8 and 14–16 depend on claims 1 and 13 and include all features therefrom, and thus are patentable for at least the reasons given above in relation to claims 1 and 13.

For these reasons, Applicant requests that all other rejections under 35 U.S.C. §103 be withdrawn.

Thus, for the reasons given above, claims 1-19 are novel and non-obvious over the above references, alone or in combination.

Conclusion:

Applicant believes that this entire application is in condition for allowance and respectfully requests a notice of allowance. If the Examiner has any questions or believes that an interview would further prosecution of this application, the Examiner is invited to telephone the undersigned at 857-334-1124.

Respectfully submitted,

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Dated: 27 July 2015

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